

Research on the relationship between Internal Governance Mechanism, Corporate Social Responsibility and Corporate Value in Food Industry

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Abstract. Based on the data of food industry in China during the year 2010 to 2014, this paper empirically analyzes the impact of internal governance mechanism, corporate social responsibility on corporate value. The results show that the proportion of the first major shareholders, consumer social responsibility, corporate social responsibility and government social responsibility are significantly positive correlated with the value of the enterprise; the proportion of executives holding shares and the social responsibility of creditors are significantly negative correlated with the value of the enterprise. On this basis, policy suggestions are put forward to guiding enterprises to better realize corporate value.

Introduction

Under the background of China's economic development in new normal, the food industry got rapid development as one of the most important support of national economy. With the improved consumer awareness to safeguard their own legitimate rights and interests, much higher requirements about food quality are put forward, which makes food safety issues become social focus and more sensitive than before. In recent years, a series of food safety incident have been frequently exposed, casting a shadow to food industry. Adverse consequences made industry's reputation plummeted and seriously hindered the healthy development of the industry. Corporate social responsibility (CSR) is the only way that can help food enterprises transform the crisis and thus the entire food industry can return to the benign development track. Having a direct bearing on the people's life safety and national stability, food enterprises must attach great importance to and conscientiously fulfill their social responsibilities while seeking steady growth of benefits. The decision to fulfill CSR is greatly related to corporate internal governance mechanism. Hence, this paper are going to study on relations between internal governance mechanism, corporate social responsibility and corporate value in food industry and provide evidence support and suggestions for food enterprises.

Literature Review

The relationship between Internal governance mechanism and corporate value. Sun and Zhang took 519 listing companies in A-share market as research sample and confirmed that the size of the board of directors of China's Listed Firms was negatively correlated with corporate value, the smaller the size of the board of directors, the more business value creation^[1]. Zhou and Hao analyzed 509 sample companies, and considered that the impact of the board of directors on corporate value was negative in the short term, but from long-term consideration the influence would be positive^[2]. Tan and Jing found that corporate value and the first major shareholder's shareholding were in significantly positive U-shaped relationship, and the balance of ownership had a significant negative correlation with corporate value^[3]. The relationship between CSR and corporate value. Wang *et al.* used method of Game Analysis and confirmed that in the same industry, large enterprises in dominant position undertaking CSR could realize far greater enterprise value than the cost of CSR, in contrast,

small and medium enterprises without CSR could get far greater than prospective earnings by assuming CSR^[4]. Wang found that in the dairy industry, the contribution rate of enterprises to the creditors and the contribution rate of shareholders both had significantly positive correlation with corporate value^[5]. Kong and Li tested the relationship between CSR and corporate financial performance, and found that the good social responsibility performance could effectively improve the financial performance of enterprises^[6]. Therefore the research hypothesis of this paper are proposed as follows:

H1: Good corporate governance mechanism has a positive effect on corporate value.

H2: Positive behavior of assuming CSR can help improve the creation of corporate value.

Materials and Methods

In this paper, we select 47 companies listed in the Shanghai and Shenzhen Stock Exchange of our country, a total of 231 data samples of food industry during the year 2010 to 2014 are chosen as initial sample. To make the data representative, taking into account that the performance of new listed companies is not stable enough, we exclude the newly-listed companies in or after 2009. To ensure the quality of statistical data, we exclude companies that ST, * ST or PT; To avoid the influence of different regulatory environment on the internal governance, we also exclude listed companies who issued B shares and H shares; To eliminate the effect of outliers, we exclude listed companies whose total assets, liabilities, net assets book value index is negative or for 0. All data source from database called CSMAR, data processing by SPSS20.0, Excel2007.

Corporate value index. We select Earnings Per Share (EPS) as variable to measure enterprise value. EPS can effectively reflect after-tax profits created by per share, the higher the ratio, the more profits companies create.

Internal governance mechanism. The main effect factors of internal corporate governance mechanism are the following six indicators: the proportion of the largest shareholders, ownership balance, chairman and general manager of two jobs is divided, executives' shareholding, director size and the proportion of independent directors.

Corporate social responsibility index. According to the definition of corporate social responsibility, this paper evaluates CSR from the following six aspects: enterprise's responsibility for consumer, for staff, for creditors, for community, for community and for government. Specifically, $CSR = \text{current business income} + \text{cash paid to employee and for employee} + \text{cash paid for goods purchased and labor services received} + \text{cash paid for distribution of dividends, profit or cash payments for interests} + \text{expenditures for public welfare donations} + \text{taxes paid}$. Taking into account those six aspects of different contribution rate to corporate social responsibility, we add weight to evaluate CSR. Take consumer responsibility for example, the revised contribution rate of corporate social responsibility can be calculated as: $\text{consumer responsibility contribution rate} = \text{current operating income} * \text{current operating income} / \text{corporate social responsibility} / \text{total assets of the company}$. To avoid repetition, formula of the other five indicators' rate of contribution will not described in this paper.

Control variable. The size of the company, growth and capital structure are chosen as control variables in this paper to help empirical analysis. The specific definitions of the variables are shown in

Table 1:

Table1 Summary and definition of variables

Variable classification	Variable name	Variable symbol
Dependent variable	Corporate value	EPS
Internal governance mechanism	Largest shareholder stake	CR
	Equity balance degree	Z
	If Chairman and general manager set respectively	Twop
	Proportion of top executives	TMS
	Board size	BS
Corporate social responsibility	Independent director ratio	BI
	Consumer responsibility	Cusr
	Employee responsibility	Empr
	Creditor responsibility	Crer
	Shareholder liability	Shar
	Community responsibility	Comr
Control variable	Government responsibility	Govr
	Firm size	Size
	Growth	Grow
	Capital structure	DAR

Model construction. Based on the analysis of the impact of corporate internal governance mechanism, corporate social responsibility on corporate value, using multiple linear regression analysis method to test the research hypotheses, the model is constructed as follows:

$$EPS = \beta_0 + \beta_1 CR_i + \beta_2 Z_i + \beta_3 Twop_i + \beta_4 TMS_i + \beta_5 BS_i + \beta_6 BI_i + \beta_7 Cusr_i + \beta_8 Empr_i + \beta_9 Crer_i + \beta_{10} Shar_i + \beta_{11} Comr_i + \beta_{12} Govr_i + \beta_{13} Size_i + \beta_{14} Grow_i + \beta_{15} DAR_i + \varepsilon_i \quad (1)$$

Among them, β_0 is intercept, $\beta_1 - \beta_{15}$ are coefficient, ε_i is residual epsilon.

Results and Discussion

Descriptive statistics of variables. From table 2, the results show that the maximum value of EPS is 15.378, the minimum value is -1.1528, the mean value is 0.631, Z minimum 0.580, maximum 40.441, the standard deviation up to 6.415, which reflects the large gap between the company's value and the overall level is low. The differences may be caused by the different nature of equity and so on; the value of Twop is 0.9, the standard deviation is 0.296, showing that in order to achieve the right balance, the vast majority of the companies make the two positions of general manager and chairman in separation; executives shareholding is low as a whole, because executives incentives for executives on corporate governance has not been universally implemented in China; the scale of the board of directors of the listed companies generally maintained at about 8 people, the independent directors of the ratio of the maximum 66.7%, minimum 0, average 37.2%, indicating that proportion of independent directors in many companies has over 1/3 of the total number of the board size.

Table 2 Descriptive statistics of variables

Variable classification	Variable name	Min	Max	Mean	Standard deviation
Corporate value	EPS	-1.152	15.378	0.631	1.828
	CR	0.000	1.000	0.240	0.430
	Z	0.580	40.441	6.213	6.415
Internal governance mechanism	Twop	0.000	1.000	0.900	0.296
	TMS	0.000	0.055	0.001	0.007
	BS	0.000	15.000	8.890	1.886
	BI	0.000	0.667	0.372	0.084
	Cusr	0.026	2.637	0.459	0.361
Corporate social responsibility	Empr	0.000	0.019	0.004	0.003
	Crer	0.002	2.656	0.298	0.380
	Shar	0.000	0.024	0.001	0.003
	Comr	0.000	0.002	0.000	0.000
	Govr	0.000	0.103	0.011	0.016
	Size	20.102	24.911	21.939	1.026
Control variable	Grow	-1.000	1.000	0.040	0.243
	DAR	0.000	1.000	0.340	0.474

Correlation analysis. Table 3 gives the Pearson correlation analysis between the variables. CR and BS have a significant positive correlation with EPS, revealing that the internal governance mechanism of the company has a significant impact on corporate value, which makes further testing of Hypothesis 1 possible. Shar and Govr both have a significantly positive correlation with EPS, showing that CSR has a significant impact on the value of the enterprise. The analysis above puts further validation of Hypothesis 2 that CSR have a positive role in promoting the value of the enterprise. The correlation coefficient between the explanatory variables is not more than 0.5, the highest of the correlation coefficient between Shar and EPS is 0.505. We can conclude that there is almost no linear problem between the 12 explanatory variables.

Table 3 Pearson correlation matrix of the variables

Variable	EPS	CR	Z	Twop	TMS	BS	BI	Cusr	Empr	Crer	Shar
CR	.254***										
Z	.052	.444***									
Twop	.070	.117	-.015								
TMS	-.057	-.080	-.087	.056							
BS	.180***	.116	-.067	-.036	-.004						
BI	.058	.096	.054	-.100	-.007	.042					
Cusr	.032	.129	.008	.231***	-.040	-.219***	.066				
Empr	-.079	.132**	.160**	.048	-.172***	.055	.006	-.101			
Crer	-.062	.058	-.005	.171***	.016	-.247***	.004	.923***	-.219***		
Shar	.505***	.065	-.023	.105	.026	.175***	.049	-.105	-.103	-.198***	
Comr	-.036	-.033	-.041	.025	-.014	.006	-.033	-.062	.019	-.056	-.029
Govr	.473***	.257***	.227***	.106	-.094	.172***	.030	-.139**	.199***	-.361***	.429***

OLS multivariate regression analysis. According to the established model1-model4 in table 4, the fractional step method of OLS Regression is used to analyze the company's internal governance mechanism, corporate social responsibility and corporate value. The results show that, compared with model1-model3, model 4 has a higher fitting degree with the R² Adjusted value is 44.1%. Through the analysis of model4, we can see that CR, Shar, Govr and Size, these four variables are significantly

positively correlated with EPS; TMS and DAR are in significantly negative correlation with EPS; and the other variables have no significant effect on corporate value. In order to carry out different variance test for the regression result in model 4, the residual absolute value of $|e|$ and the independent variables are analyzed by the method of Spearman Correlation Analysis. Taking $1/|e|$ as the weight of model4, we can get the final test model5 in table4.

Table 4 OLS regression and WLS improved results

Independent variable	Model 1	Model 2	Model 3	Model 4	WLS improved Model 5
Intercept	-26.242***	-43.330	-62.845	-13.102***	-6.963***
CR		-19.468		0.471*	-0.127
Z		1.352		-0.010	-0.020*
Twop		19.955		-0.047	0.034
TMS		-1146.992		-25.461*	-20.711**
BS		0.310		-0.051	-0.043
BI		87.263		-0.958	0.908
Cusr			-20.157	-0.302	2.216***
Empr			1938.238	-34.169	-35.048
Crer			25.796	0.496	-1.826**
Shar			101.611	158.500***	74.383**
Comr			16800.442	-108.789	6381.729
Govr			-146.909	28.508***	7.635
Size	1.265***	-0.552	2.680	0.653***	0.329***
Grow	1.299	3.455	7.253	0.400	0.179
DAR	-2.790***	-8.145	-1.996	-0.505**	-0.231
F-measure	25.588***	0.187	0.510	12.926***	7.213
Adjusted R ²	0.245	-0.033	-0.020	0.441	0.498

Note: *, **, *** respectively represents the significant level of 10%, 5%, 1%

Modified WLS regression analysis. In model5, CR has a significant positive correlation with EPS in a certain range and excessively large proportion will have negative impact on corporate value, which is consistent with the actual development of food companies. Z shows a significant negative correlation with corporate value and further demonstrates that high proportion of the first shareholder will create a negative phenomenon of "one share jumbo", hindering supervision mechanism playing a role. TMS and EPS are in a significant negative correlation, this is because when the executives stake beyond a certain range, they will have greater control and weak supervision over the company, offsetting the executives' shareholding incentive effects. The analysis above makes the hypothesis 1 that the good internal governance mechanism is conducive to the realization of the enterprise value verified eventually. Cusr, Shar, Govr and EPS are significantly positive related, which means that positive behaviors of companies assuming social responsibility can help get social recognition, so as to enhance corporate value. The correlation between Crer and EPS is significantly negative. Without affecting the premise of enterprise credibility, the behavior of assuming more responsibility for creditors will weaken the effect of accounts receivable as "virtual asset", causing negative impact to company's financial management to a certain degree.

Conclusions

In this research, the relationship between internal governance mechanism, corporate social responsibility and corporate value is empirically analyzed. The results show that the first major shareholder, consumer social responsibility, shareholder social responsibility and government social responsibility are in significantly positive correlation with corporate value; the balance of equity, share proportion held by management and the creditor social responsibility are significantly negative correlated with corporate value. Therefore, good corporate internal governance mechanism and active

behavior of assuming CSR are both helpful to the realization of enterprise value. Because of the importance and particularity of the industry, listed companies in the food industry should establish and improve more reasonable internal control mechanism, strengthen CSR and fulfill supervision system, thus achieving sustained, healthy, stable and rapid development.

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